

WHAT IS CLAIMED IS:

1. A scroll-type fluid machine comprising:

5 a stationary scroll having a stationary wrap which axially extends;

an orbiting scroll having an orbiting wrap which is engaged with said stationary wrap of said stationary scroll, air being pressurized by revolving said orbiting scroll with respect to the stationary scroll eccentrically;

10 a discharge bore formed in the stationary scroll to discharge said pressurized air; and

a cooler including a cooling path that communicate with said discharge bore to pass and cool said air.

15 2. A scroll-type fluid machine as claimed 1 wherein the fluid machine is a scroll compressor.

3 A scroll-type fluid machine as claimed 1, wherein the fluid machine is a scroll vacuum pump.

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4 A scroll-type fluid machine as claimed in claim 1, comprising a mechanism for preventing the orbiting scroll from rotating on its own axis so that the orbiting scroll may be revolved with respect to the stationary scroll at predetermined eccentricity.

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5 A scroll-type fluid machine as claimed in claim 1 wherein a compression chamber is formed between the orbiting scroll and the

stationary scroll so that volume of the compression chamber may become smaller towards a center.

6 A scroll-type fluid machine as claimed in claim 5 wherein the
5 discharge bore communicates with the compression chamber.

7. A scroll-type fluid machine as claimed in claim 1 wherein
cooler comprises a rectangular body, and a plurality of cooling fins,
opening between the cooling fins being closed a cover bolted to the
10 body.

8. A scroll-type fluid machine as claimed in claim 1 wherein the
cooler is made of high thermal conductivity material such as Al alloy
or Cu alloy.

15 9. A scroll-type fluid machine as claimed in claim 1 wherein a
plurality of cooling paths are formed in parallel in the cooler and
communicate with each other via vertical communicating paths to form
a long cooling path that communicates with the discharge bore.

20 10. A scroll-type fluid machine as claimed in claim 1 wherein the
cooling fin of the cooler is covered with a blowing duct, an absorbing
fan being provided at an opening of the blowing duct, air from the duct
being discharged to cool the cooling fin.

25 11. A scroll-type fluid machine as claimed in claim 1 wherein the
cooler comprises a body and a conduit engaged in a semi-spherical

groove, one end of the conduit being connected to discharge bore of the stationary scroll, the other end of the conduit being connected to a cooling outlet.

5 12. A scroll-type fluid machine as claimed in claim 1, comprising a two-step scroll compressor that comprises an outer low-pressure pressurizing step portion and an inner high-pressure pressurizing step portion, air pressurized in and discharged from the low-pressure pressurizing step portion being further pressurized by the higher-
10 pressure pressurizing step portion.

13. A scroll-type fluid machine comprising:

a stationary scroll having a stationary wrap which axially extends;

15 an orbiting scroll having an orbiting wrap which is engaged with said stationary wrap of said stationary scroll, air being pressurized by revolving said orbiting scroll with respect to the stationary scroll eccentrically; and

a discharge bore formed in the stationary scroll to discharge
20 said pressurized air, said stationary scroll having a cooling path which communicates with the discharge bore to cool said air from the discharge bore.